WHAT IS CLAIMED IS:

1. A mold assembly for a molding process comprising:

a mold member; and

an anisotropic diffuser member, said diffuser member comprising a fibrous composite having a plurality of fibers each having a respective length, said fibers arranged in a lay-up with said length of each fiber being arranged in a substantially uniform direction within said diffuser member, wherein said diffuser member is arranged in a position permitting a rapid transfer of heat along said length of each fiber to said mold member.

2. The mold assembly for a molding process according to claim 1, wherein said fibrous composite is a graphite reinforced composite.

3. The mold assembly for a molding process according to claim 1, wherein said diffuser member is a diffuser plate.

4. The mold assembly for a molding process according to claim 1, wherein said diffuser member is a thermal coating.

5. The mold assembly for a molding process according to claim 1, wherein said mold member includes a mold cavity, said diffuser member being arranged within said mold cavity.

6. The mold assembly for a molding process according to claim 1, wherein said mold member includes a mold cavity, said diffuser member being arranged alongside said mold cavity.

7. The mold assembly for a molding process according to claim 1, further comprising a heating member.

8. An anisotropic diffuser plate for a mold assembly, said diffuser plate comprising a fibrous composite having a plurality of fibers each having a respective length, said fibers arranged in a lay-up with said length of each fiber being arranged in a substantially uniform direction within said diffuser member, wherein said diffuser member is arranged in

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a position permitting a rapid transfer of heat along said length of each fiber.

9. The diffuser plate according to claim 8, wherein said fibrous composite is a graphite reinforced composite.

10. A method of controlling process temperatures in a molding apparatus, said method comprising the steps of:

controlling a temperature of a mold member with a heat source; and

arranging an anisotropic diffuser member along a surface of said mold member for distributing heat uniformly from said heat source along a length of said anisotropic diffuser member.

11. The method of controlling process temperatures in a molding apparatus according to claim 10, wherein said diffuser member includes a fibrous reinforced composite having a plurality of fibers each having a respective length, said fibers arranged in a lay-up with said length of each fiber arranged in a substantially uniform direction within said diffuser member, wherein said diffuser member is arranged in a position permitting a rapid transfer of heat along said length of each fiber.

12. The method of controlling process temperatures in a molding apparatus according to claim 11, wherein said fibrous composite is a graphite reinforced composite.

13. The method of controlling process temperatures in a molding apparatus according to claim 11, wherein said diffuser member is arranged in a position along an interior surface of a mold cavity of said molding member.

14. The method of controlling process temperatures in a molding apparatus according to claim 11, wherein said diffuser member is arranged in a position along an exterior surface of a mold cavity of said molding member.

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